

SUMMARY DATA FOR CASE 3B

This section contains the following economic data for case 3B:

- Capital Investment and Revenue Requirement Summary
- Total Plant Cost

CAPITAL INVESTMENT & REVENUE REQUIREMENT SUMMARY			
TITLE/DEFINITION			
Case:	IGCC w/o CO ₂ Removal (3B)		
Plant Size:	424.5 (MW,net)	HeatRate:	7,915 (Btu/kWh)
Primary/Secondary Fuel(type):	Illinois #6	Cost:	1.24 (\$/MMBtu)
Design/Construction:	4 (years)	BookLife:	20 (years)
TPC(Plant Cost) Year:	1999 (Dec.)	TPI Year:	2000 (Jan.)
Capacity Factor:	65 (%)	CO ₂ Removed	
CAPITAL INVESTMENT			
		\$x1000	\$/kW
Process Capital & Facilities		427,040	1005.9
Engineering(incl.C.M.,H.O.& Fee)		25,622	60.4
Process Contingency		19,954	47.0
Project Contingency		63,367	149.3
TOTAL PLANT COST(TPC)		\$535,983	1262.5
TOTAL CASH EXPENDED	\$535,983		
AFDC	\$47,525		
TOTAL PLANT INVESTMENT(TPI)		\$583,508	1374.4
Royalty Allowance			
Preproduction Costs		14,222	33.5
Inventory Capital		4,361	10.3
Initial Catalyst & Chemicals(w/equip.)			
Land Cost		700	1.6
TOTAL CAPITAL REQUIREMENT(TCR)		\$602,791	1419.9
OPERATING & MAINTENANCE COSTS (1999 Dollars)			
		\$x1000	\$/kW-yr
Operating Labor		5,503	13.0
Maintenance Labor		4,300	10.1
Maintenance Material		6,450	15.2
Administrative & Support Labor		2,451	5.8
TOTAL OPERATION & MAINTENANCE		\$18,704	44.1
FIXED O & M			28.86 \$/kW-yr
VARIABLE O & M			0.27 ¢/kWh
CONSUMABLE OPERATING COSTS,less Fuel (1999 Dollars)			
		\$x1000	¢/kWh
Water		237	0.01
Chemicals		270	0.01
Other Consumables			
Waste Disposal		1,306	0.05
TOTAL CONSUMABLE OPERATING COSTS		\$1,814	0.08
BY-PRODUCT CREDITS (1999 Dollars)		(\$876)	-0.04
FUEL COST (1999 Dollars)		\$23,725	0.98
PRODUCTION COST SUMMARY			
		Levelized (Over Book Life \$)	
		\$/ton CO₂	¢/kWh
Fixed O & M		28.9/kW-yr	0.51
Variable O & M			0.27
Consumables			0.08
By-product Credit			-0.04
Fuel			0.98
TOTAL PRODUCTION COST			1.79
LEVELIZED CARRYING CHARGES(Capital)		195.9/kW-yr	3.44
LEVELIZED (Over Book Life) BUSBAR COST OF POWER			5.24

ESTIMATE BASIS/FINANCIAL CRITERIA for REVENUE REQUIREMENT CALCULATIONS			
GENERAL DATA/CHARACTERISTICS			
Case Title:	IGCC w/o CO ₂ Removal (3B)		
Unit Size:/Plant Size:	424.5 MW _{net}	424.5 MWe	
Location:	East-West Region		
Fuel: Primary/Secondary	Illinois #6		
Energy From Primary/Secondary Fuels	7,915 Btu/kWh	Btu/kWh	
Levelized Capacity Factor / Preproduction(equivalent months):	65 %	1 months	
Capital Cost Year Dollars (Reference Year Dollars):	1999 (December)		
Delivered Cost of Primary/Secondary Fuel	1.24 \$/MBtu	\$/MBtu	
Design/Construction Period:	4 years		
Plant Startup Date (1st. Year Dollars):	2000 (January)		
Land Area/Unit Cost	350 acre	\$2,000 /acre	
FINANCIAL CRITERIA			
Project Book Life:	20 years		
Book Salvage Value:	%		
Project Tax Life:	20 years		
Tax Depreciation Method:	Accel. based on ACRS Class		
Property Tax Rate:	1.0 % per year		
Insurance Tax Rate:	1.0 % per year		
Federal Income Tax Rate:	34.0 %		
State Income Tax Rate:	4.2 %		
Investment Tax Credit/% Eligible	%	%	
Economic Basis:	Over Book Constant Dollars		
Capital Structure	% of Total	Cost(%)	
Common Equity	45	12.00	
Preferred Stock	10	8.50	
Debt	45	9.00	
Weighted Cost of Capital:(after tax)		8.81 %	
Escalation Rates	Over Book Life	1999 to 2000	
General	% per year	% per year	
Primary Fuel	% per year	% per year	
Secondary Fuel	% per year	% per year	

Client: Project:		EPR/DOE VISION 21 INNOVATIVE POWER CYCLES		Report Date: 19-Sep-2000 12:44 PM					
Case: Plant Size:		IGCC w/o CO ₂ Removal (3B) 424.5 MW.net		Estimate Type: Conceptual					
		TOTAL PLANT COST SUMMARY		Cost Base (Dec) 1999 (\$x1000)					
Acct No.	Item/Description	Equipment Cost	Material Cost	Labor Direct Indirect	Sales Tax	Bare Erected Cost \$	Eng'g CM H.O.& Fee	Contingencies Process Project	TOTAL PLANT COST \$ \$/KW
1	COAL & SORBENT HANDLING	6,248	1,284	5,712	400	\$13,643	819	2,892	\$17,354 41
2	COAL & SORBENT PREP & FEED	9,314	2,180	10,530	737	\$22,761	1,366	764	\$28,172 66
3	FEEDWATER & MISC. BOP SYSTEMS	4,074	3,818	4,157	291	\$12,340	740	2,946	\$16,026 38
4	GASIFIER & ACCESSORIES	11,261		11,903	833	\$23,997	1,440	2,400	\$30,621 72
4.1	Gasifier & Auxiliaries(Destec)	31,676		33,494	2,345	\$87,515	4,051	6,752	\$86,150 203
4.2	High Temperature Cooling	47,761		w/equip.		\$47,761	2,866	5,063	\$55,690 131
4.3	ASU/Oxidant Compression	10,808	4,215	10,556	739	\$26,317	1,579	975	\$32,968 78
4.4-4.9	Other Gasification Equipment SUBTOTAL 4	101,507	4,215	55,933	3,917	\$165,591	9,935	10,136	\$205,428 484
5A	GAS CLEANUP & PIPING	19,451	3,943	9,849	689	\$33,933	2,036	2,216	\$45,406 107
5B	CO ₂ REMOVAL & COMPRESSION								
6	COMBUSTION TURBINE/ACCESSORIE	58,076	337	2,825	198	\$61,100	3,666	6,110	\$77,963 184
6.1	Combustion Turbine Generator		337	398	28	\$763	46	243	\$1,051 2
6.2-6.9	Combustion Turbine Accessories SUBTOTAL 6	58,076	337	3,223	226	\$61,863	3,712	6,110	\$79,014 186
7	HRSG, DUCTING & STACK	13,652		2,054	144	\$15,850	951	1,680	\$18,481 44
7.1	Heat Recovery Steam Generator	2,038	962	1,713	120	\$4,834	290	784	\$5,908 14
7.2-7.9	HRSG Accessories, Ductwork and Stack SUBTOTAL 7	15,690	962	3,767	264	\$20,684	1,241	2,464	\$24,389 57
8	STEAM TURBINE GENERATOR	13,355		2,090	146	\$15,590	935	1,653	\$18,179 43
8.1	Steam TG & Accessories	4,163	383	3,284	230	\$8,060	484	1,490	\$10,033 24
8.2-8.9	Turbine Plant Auxiliaries and Steam Pipln SUBTOTAL 8	17,518	383	5,374	376	\$23,650	1,419	3,142	\$28,212 66
9	COOLING WATER SYSTEM	4,799	3,049	4,786	335	\$12,968	778	2,548	\$16,294 38
10	ASH/SPENT SORBENT HANDLING SYS	4,713	739	4,313	302	\$10,067	604	737	\$12,701 30
11	ACCESSORY ELECTRIC PLANT	8,671	3,864	9,842	689	\$23,066	1,384	4,131	\$28,581 67
12	INSTRUMENTATION & CONTROL	4,935	746	3,720	260	\$9,661	580	1,447	\$11,687 28
13	IMPROVEMENTS TO SITE	2,028	1,195	4,753	333	\$8,309	499	2,642	\$11,450 27
14	BUILDINGS & STRUCTURES		3,613	4,571	320	\$8,504	510	2,254	\$11,268 27
TOTAL COST		\$257,024	\$30,328	\$130,550	\$9,138	\$427,040	\$25,622	\$19,954	\$535,983 1263